

INITIAL STATEMENT OF REASONS

CONSIDERATION OF POTENTIAL AMENDMENTS TO BUILDING ENERGY EFFICIENCY STANDARDS CALIFORNIA CODE OF REGULATIONS, PART 6 Docket No. 02-BSTD-1

DESCRIPTION OF PUBLIC PROBLEM

On December 19, 2001, the California Energy Commission (“Commission”) approved an Order Instituting Rulemaking to respond to a petition submitted on November 26, 2001, by Tyco Adhesives and Shurtape Technologies, Inc (“Tyco”). The petition for rulemaking requested that the Commission repeal and/or delay the effective date of building energy efficiency standards in the California Administrative Code, Title 24, Part 6, Sections 124(b)1.D., 124(b)2.D., 150(m)2.D. and 150(m)3.D. These regulations allow the use of cloth back rubber adhesive duct tape (duct tape) for sealing ducts only if installed in combination with mastic.

The requirements Tyco seeks to repeal are a part of the regulations adopted by emergency pursuant to AB 970 (Statutes of 2000) in January 2001. These regulations were subsequently readopted and made permanent in April 2001. The regulations went into effect for nonresidential buildings and some residences on June 1, 2001. They went into effect for the remaining residential buildings on January 1, 2002.

Tyco raised concerns with the duct tape requirements late in the rulemaking that made the regulations permanent, and was subsequently provided with an additional hearing on June 14, 2001, to express its concerns. At that time, the Commission’s Energy Efficiency Committee concluded that no new information was presented which warranted a change in the adopted regulations.

However, in response to Tyco’s recent petition, the Commission believes these issues should be the subject of reconsideration and further public discussion. In granting the petition, the Commission took no position on the substantive merits of Tyco’s petition.

STATEMENT OF SPECIFIC PURPOSE AND RATIONALE

The scope of the rulemaking proceeding is narrowly defined to include only portions of Title 24, Part 6 that are directly related to Tyco’s petition. Other portions of the Building Energy Efficiency Standards are outside the scope of the rulemaking. The Express Terms under consideration by the Commission address the following Tyco concerns.

A. Allowance of Cloth Back Rubber Adhesive Duct Tape on Specific Joints

Tyco has stated that cloth back rubber adhesive duct tape is only recommended for use in sealing the attachment of the cores of flex ducts to metal fittings and the attachment of the outer moisture barrier jacket of flex ducts. This is consistent with the scope section of UL 181B and with the instructions for sealing flexible ducts in Standard 6-3 of the 1998 California Mechanical Code and Standard 6-5 of the 2001 California Mechanical Code. They have argued that for this specific application, cloth back rubber adhesive duct tape satisfactorily seals these attachments without the use of mastic in combination with the cloth back rubber adhesive duct tape. The

current language in the California Energy Efficiency Standards disallow cloth back rubber adhesive duct tape unless it is used in combination with mastic for all duct system joints and attachments. There currently are no explicit provisions in Title 24 that specify that cloth back rubber adhesive duct tape is allowed for use on some duct attachments and prohibited on others. The Commission will consider an exception to its current Standards that would allow cloth back rubber adhesive duct tape to be used without mastic only on the flex duct attachments that Tyco has said are intended by manufacturers' recommended practice.

B. Specific Installation Requirements

Tyco has argued that cloth back rubber adhesive duct tape is satisfactory on the flex duct attachments that the tape is recommended for, particularly if it is installed as manufacturers recommend. This includes the expectation that the connections will be cleaned to be free of dirt, oil and grease, and the tape is installed properly with the proper drawbands. Researchers and other parties have reported that duct tape is often not installed consistent with manufacturer recommendations. The Commission will consider adoption of specific installation requirements.

C. Field-Fabricated Duct Systems in Low-Rise Residential Buildings

Tyco has said that it is most concerned about the current requirements for cloth back duct tape for use in residential production homes. It is the Commission's understanding that cloth back rubber adhesive duct tape is commonly used on field-fabricated duct systems and not on factory-fabricated duct systems. The Commission will consider whether an exception to the current requirements, for only allowing cloth back duct tape in combination with mastic, should be limited to field-fabricated duct systems in low-rise residential buildings.

D. Sunset Date

Tyco has proposed to meet the current Standards requirements by introducing into California a superior cloth back duct tape using the butyl adhesive that it currently uses only on its foil back duct tape. However, Tyco has requested that the effective date of the current Standards provisions be extended to allow cloth back duct tape with rubber adhesive to be used until Tyco has had sufficient time to introduce a cloth back duct tape with butyl adhesive into California. The Commission will consider whether an exception to allow cloth back duct tape with rubber adhesive to be installed without mastic should include a sunset date after which the current Standards provisions would apply.

DOCUMENTS AND STUDIES RELIED UPON

In initiating this rulemaking the Commission relies upon the following documents and studies:

Letter to Commissioner Robert Pernell from Max H. Sherman, Lawrence Berkeley National Laboratory (LBNL), December 19, 2001.

Letter to Commissioner Robert Pernell and Commissioner Arthur H. Rosenfeld, from William W. Funderburk, representing Tyco Adhesives, June 22, 2001.

Letter to Commissioner Robert Pernell from Max H. Sherman, LBNL, June 12, 2001.

Letter to William J. Keese, Chairman, from Marvin A. Kroeber, Air Diffusion Council, May 22, 2001.

AB 970 Building Energy Efficiency Standards, Nonresidential Contractor's Report, Volume 1, Measure Analysis, California Energy Commission, November, 2000.

AB 970 Building Energy Efficiency Standards, Residential Contractor's Report, Volume 1, Summary, California Energy Commission, November, 2000.

AB 970 Building Energy Efficiency Standards, Residential Contractor's Report, Volume 3, Analysis and Impact, California Energy Commission, November, 2000.

Assessing the Longevity of Residential Duct Systems, LBNL, February, 2000

Can Duct Tape Take the Heat?, LBNL, published in *Home Energy* magazine, July/August, 1998.

Delivering Tons to the Register: Energy Efficiency, Design and Operation of Residential Cooling Systems, LBNL, published in *Proceedings for the 2000 American Council for an Energy-Efficient Economy (ACEEE) Summer Study on Energy Efficiency in Buildings*.

Distribution Effectiveness and Impact on Equipment Sizing for Residential Thermal Distribution Systems, LBNL, June, 1999.

Duct Installation and Sealing Standards, Pacific Gas and Electric Company, May, 1999, updated September, 2000; adopted by the Consortium for Energy Efficiency as part of *Specification of Energy-Efficient Installation and Maintenance Practices for Residential HVAC Systems*, August, 2000.

Improving the Energy Efficiency of Air Distribution Systems in New California Homes, Report for California Institute for Energy Efficiency, ConSol and LBNL, July, 1996, updated June, 1999.

Leakage Diagnostics, Sealant Longevity, Sizing and Technology Transfer in Residential Thermal Distribution Systems, LBNL, January, 1998.

Leakage Diagnostics, Sealant Longevity, Sizing and Technology Transfer in Residential Thermal Distribution Systems, Part II, LBNL, December, 1998.

Treatment of Residential Duct Leakage in Title-24 Energy Efficiency Standards, Section Six of Energy Characteristics, Code Compliance and Occupancy of California's 1993 Title 24 Houses (1993 Residential Field Data Project), California Energy Commission, May, 1995.

ALTERNATIVES THAT MAY BE CONSIDERED

The Express Terms result from a specific proposal in a petition for rulemaking. One alternative is to not adopt the Express Terms. Other alternatives to the Express Terms may be proposed by participants in the rulemaking proceeding. At this point the Commission has not rejected alternatives to the Express Terms.

NO SIGNIFICANT IMPACT ON BUSINESS

The Commission anticipates that the rulemaking proceeding will not result in significant impact on business. This is because the proceeding will consider relaxing requirements that Tyco asserts restricts the use of its product. Any action taken would thus reduce that impact, to the extent that it may exist. Relaxing the current Standards provisions may cause an increase in energy use and energy bills for businesses in buildings with duct systems using cloth back rubber adhesive duct tape. The Commission will consider how to balance these impacts on different businesses.

ALTERNATIVES THAT WOULD REDUCE IMPACT ON SMALL BUSINESSES

The Commission anticipates that the rulemaking proceeding will not result in significant impact on small businesses. The Commission will consider the potential impact on small business when it assesses the alternatives described in the “Alternatives That May Be Considered” section above.

DUPLICATION OR CONFLICT WITH FEDERAL REGULATIONS

The rulemaking proceeding will not duplicate or conflict with federal regulations.